

SUMMARY

Burial Depth Requirements by State

- Only 18 states have burial depth requirements of any kind
- 16 specify a soil buffer from top of body to the natural surface
- Most popular soil buffer amount: 5 states require 18"; 5 require 24"
- Only 2 states specify by depth of grave (Vermont and New Mexico)

Informal Poll Results Conducted February 2-3, 2017

Respondents:

- 24 green cemeterians from 16 states (AL, CT, GA, ID, IL, ME, MI, NJ, NY, OH, OR, PA, TX, VA, WA, WI)
- 10 hybrid level, 12 natural level, 2 conservation level

Questions and Responses:

Q. *At what depth do you bury adults in your green cemetery?*

A. 20 say 3.5' – 4' maximum, depending on whether using a casket or shroud; 4 say 5'

Q. *What experience have you had with animal disturbances, if any?*

A. 100% None

Q. *What cemetery policies do you have in place in regard to exhumations?*

A. A court order is required in every state. 4 have written policies.

Quotes

"We have not had any experience or issues with animal disturbances, nor have we ever heard of an issue with animal disturbances at any of the green burial cemeteries with whom we have had contact."

—Amy Henricksen, Kokosing Nature Preserve, OH

"We've had no animal disturbances. There is research which shows the deepest an animal can dig is 18 inches, and that's for feral pigs. Other animals such as dogs and bears can't dig much beyond 12 inches."

—Pete McQuillin, Penn Forest Natural Park, PA

"We opened the third Green Cemetery in the USA, the first Green Family Cemetery in America, the first Green Veteran's Cemetery on the planet. We have coyotes, red wolf hybrids, bobcats, cougars and NEVER has a varmint enter a grave at even only 24 inches in depth."

—George H. Russell, Ethician Natural Cemetery, TX

"About 4 feet...the deeper you go, the more sterile the soil becomes. We then backfill with the topsoil first (which is full of bio-organisms). Absolutely none [animal disturbances] ...and we have coyotes by the field-full."

—Ron Zartman, Ridgeview Memorial Gardens, MI

"We have not had any evidence of animals disturbing burial sites. At most, they sniff around at the freshly overturned earth, possibly mark territory, and eat any lingering flowers from the services."

—Sara Brink, Foxfield Conservation Preserve, OH

**Testimony for Public Hearing
House Committee
February 7, 2017**

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In Support of H.3 to Amend Sec. 1. 18 V.S.A. § 5319(b)

Good afternoon. My name is Lee Webster and I am an Education Consultant and board member of the Green Burial Council. The GBC certifies green cemeteries, and educates the public to the facts around green burial. I am also the president of the National Home Funeral Alliance, Director of NH Funeral Resources, Education & Advocacy, and a consultant to the Funeral Consumers Alliance, each of which advocates for green burial.

I am here today to answer specific questions regarding burial depth, threat of animal disturbance, exhumation, and erosion. To prepare for this hearing, I quickly polled a cross-section of green burial cemeterians who operate various levels of cemeteries in locations across the country. I also compiled a list that compares state-mandated burial depths and related information. I have provided those results, plus additional educational materials that go into more depth than I will today.

Burial Depth

The optimum burial depth of a body for the *most efficient decomposition is 3.5 feet*. This is where the most active bacteria and insects provide the best chance of rapid aerobic decay. This is the primary goal of green burial—not to attempt to protect the body, but to aid in its natural biological surrender to the earth.

Two major reasons used over the past 85 years to justify extended burial depths are not valid criteria. The first, an irrational fear of infectious bodies, has been dispelled by every major health organization—Centers for Disease Control, Center for Infectious Disease, Pan

American Health Organization, World Health Organization—who all state that ***dead bodies do not automatically pose a public health risk.***

The second, the need to accommodate all of the “furniture”—the elaborate metal and exotic wood caskets, the concrete vaults—is eliminated. Existing cemetery studies investigating pollution near conventional and historical cemeteries have concluded that the bodies themselves are not the problem: the leachate from caskets and vaults is.

20 out of 24 green cemeterians answering my informal poll last week reported that they bury at 3.5 feet or close to, depending on casket or shroud choice. This burial depth translates into a foot to a foot-and-a-half of body in a shroud or casket, topped with approximately two feet of soil, equaling a 3.5 foot burial depth.

Of all 50 states, only 18 require burial depth standards of any kind. Of those, only 2 specify grave depth, Vermont being one of them. All other states require somewhere between 10 and 30 inches of soil buffer from the top of the interred to the natural surface. ***The norm is 18” to 24”***, which, not surprisingly, is the same amount required for what is called ***the smell barrier.***

Animal Disturbance

Every cemeterian polled stated that they have experienced ***no animal disturbances.*** Occasionally some enterprising skunk or raccoon enjoys flower petals left behind, others pace the perimeter and mark territory, but there has not been one report of actual disturbance in all of their collective years of operation throughout the country. As one fellow told me, “We have coyotes, red wolf hounds, bobcats and cougars, and NEVER has a varmint entered a grave, even at a 24” depth.” Pete McQuillin of Penn Forest Natural Park states, “There is research which shows the deepest an animal can dig is 18 inches, and that’s for feral pigs. Other animals such as dogs and bears can’t dig much beyond 12 inches.” Even with their keen sense of smell, animals are unable to detect organic, aerobic decomposition of bodies buried beneath two feet of soil, and certainly not with an additional 2-3’ of soil mound. If animals don’t smell anything there, neither will people.

Exhumation and Disinterment

Every respondent indicated that their state has the authority to reopen graves by court order and not one of them has had one. Only four of the cemeteries I polled have any policy in place. Three require that next-of-kin to sign a waiver agreeing to no exhumation or disinterment. If cremation is considered a final disposition with no do-overs, then green burial advocates for the same.

Erosion

Only one cemeterian whose burial ground includes a hill weighed in on the question of erosion, saying that it has not been a problem. Green burial graves account for a small space between the body and the grave bottom, just enough to remove lowering straps and meet the need for initial oxygen exchange, with soil gradually filling beneath the body as it compacts. Soil removed is returned in full, creating a mound that levels over time. Any displacement of the mound soil by rain is limited to the immediate area and does not pose any threat.

It's worth noting here that only 6 states have any requirements regarding distance of cemeteries from known water sources. Only one requires distance from electrical sources—Vermont—and 5 stipulate distance from buildings and highways. Concerns about soil displacement and water sources might best be served with similar *setback regulations* in each of these areas that forward-thinking *Vermont alone already requires*.

Conclusion and Recommendation

With Vermont already requiring the most thorough setback protections for cemeteries in the country, the only remaining issue to be resolved is one of ease, practicality, and environmental responsibility. By authorizing a minimum burial depth of 3.5 feet, the potential for reducing the amount of damage to soil and surrounding graves is significant while posing no more risk than vaultless burials have since the beginning of time. For many who choose this disposition option, doing it with the most environmental integrity is important. The Green Burial Council and our fellow green cemeterians around the country highly recommend adopting this amendment. Thank you.